



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,778	11/26/2003	Henry DaCosta	IMM174	4196
34300	7590	09/24/2008	EXAMINER	
PATENT DEPARTMENT (51851) KILPATRICK STOCKTON LLP 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			LIANG, REGINA	
ART UNIT	PAPER NUMBER		2629	
MAIL DATE	DELIVERY MODE			
09/24/2008	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,778	Applicant(s) DACOSTA ET AL.
	Examiner Regina Liang	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 July 2008.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-13, 16-23 and 26-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-13, 16-23, 26-32 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 1-13, 16-23, 26-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Fig. 3 and section [0050] of the specification discloses "If the speed is less than the speed threshold, the change in pseudo pressure is compared to a threshold value 322. If the change in pseudo pressure is less than or equal to the threshold, the processor (106) returns to step 302 in the process. If the change in pseudo pressure is greater than the threshold, the processor (106) determines whether the first interval has elapsed 324, if so, the processor (106) concludes that the user is pressing 326 and the processor (106) returns to step 302 in the process". In step 322, the specification discloses the change in pseudo pressure is compared to a **threshold value**. The specification does not disclose in step 322 that the change in pseudo pressure is compared to a first pressure threshold value and a second pressure threshold value, and outputting the signal if

the pressure signal is greater than both first pressure threshold value and the second pressure threshold value as is now claimed in claims 6 and 20.

Although the specification discloses in steps 302 and 306 of Fig. 3, comparing the pressure signal to an upper threshold and to a lower threshold, respectively, in step 306, comparing the pressure signal to a lower threshold (corresponds to a second pressure threshold value) occurs only if the pressure signal is **less than** the upper threshold (corresponds to a first pressure threshold value) at step 302. The specification does not disclose outputting the signal if the pressure signal is greater than **both** the first pressure threshold value and the second pressure threshold value. Therefore, the specification does not provide support for “comparing to a second pressure threshold value, and outputting the signal if the pressure signal is greater than both first pressure threshold value and the second pressure threshold value” as claimed in claims 6 and 20

The step 322 and the specification [0050] disclose “If the speed is less than the speed threshold, the change in pseudo pressure is compared to a threshold value 322. . . If the change in pseudo pressure is greater than the threshold, the processor (106) determines whether the first interval has elapsed 324. If so, the processor (106) concludes that the user is pressing 326”. The original specification discloses the change in pressure is greater than **a threshold value** where the threshold value is constant. Thus, the original specification does not provide support for “a change in pressure threshold” as alleged by applicant in the remarks regarding claims 1 and 19.

In view of the above 112 1st problems, the claims are interpreted in light of the specification for examination purposes.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 19-23, 26-28, 30, 32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 19-23, 26-28, 30, 32 are rejected under 35 U.S.C. 101 as being non-statutory because claims although claim a computer-readable medium on which is encoded programming code, however, page 8, [0024] of the specification discloses "Embodiments of computer-readable media include, but are not limited to, an electronic, optical, magnetic, or other storage or **transmission device** capable of providing a processor, " (emphasis added), in light of the definition in the specification, the medium (transmission device) as claimed is that of a signal. As set forth in the Interim Guidelines, page 55, "A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine". Therefore, claims 19-23, 26-28, 30, 32 are nothing but a signal and signal is non-statutory.

Claim Rejections - 35 USC § 103

6. Claims 1-3, 5-13, 16, 17, 19-23, 26, 27, 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie et al (US 5,880,411 hereinafter Gillespie) in view of Astala et al (US 6,590,568 hereinafter Astala).

As to claims 1, 19, Gillespie discloses a method comprising: receiving a pressure signal (e.g. Z-value, Fig. 1) indicating a pressure from an input device (e.g. finger); determining a change in pressure based at least in part on the pressure signal (col. 23, lines 25-32, col. 24, lines

44-60 for example); determining a velocity associated with the pressure signal; and outputting a press signal if the velocity is less than the velocity threshold (col. 36, lines 26-47, which states "There are several ways to distinguish between a true drag and a press. **A true drag can be identified if the finger's speed of motion prior to lift-off is above a small threshold.** A press can be identified if the finger was stationary through the entire gesture, possibly ignoring small, inconsequential movements"; in other words, a press can be identified if the finger's speed of motion prior to lift-off is below a small threshold), and the change in pressure is greater than a change in pressure threshold (col. 35, lines 28-30, and col. 49, lines 8-12 for example).

Gillespie does not disclose outputting a press signal if a first interval has elapsed. However, Astala is cited to teach outputting a press signal if the value of pressure of touch input is greater than a pressure threshold and a first interval has elapsed (col. 9, lines 24-35). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Gillespie to output the press signal if a first interval has elapsed as taught by Astala so as to "provide a touch screen technique for an electronic device in which the location and the time duration of an object, such as a finger or stylus or other pointed object, contacting or pressing a detection point on the touch screen, are detected" (col. 2, lines 21-23 of Astala) and to eliminate unintentional contact.

As to claims 31, 32, Gillespie discloses comparing the pressure signal to an adaptive pressure threshold value, and outputting the press signal if the pressure signal is greater than the adaptive pressure threshold value (302, 320 in Fig. 17A).

As to claim 2, Gillespie also discloses an adaptive pressure threshold value (col. 23, lines 29-32), wherein the adaptive pressure threshold value (Z_{TH}) is associated with an absolute

pressure threshold.

As to claim 3, Gillespie discloses adaptive pressure threshold value is associated with a position received from the input device (e.g. the Z-values is derived from the position signals X and Y).

As to claim 5, Gillespie discloses the adaptive pressure threshold value is associated with a user identifier (col. 23, lines 31-32).

As to claims 6, 20, Fig. 9 of Gillespie discloses the adaptive pressure threshold value comprises a first pressure threshold value, and further comprising: comparing the pressure signal to a second pressure threshold value; and outputting the signal if the pressure signal is greater than both the first pressure threshold value and the second pressure threshold value.

As to claims 16 and 20, Gillespie discloses a first pressure signal and a second pressure signal, calculating a different signal indicative of a difference between the first and second pressure signal, comparing the difference signal to a difference threshold value and outputting the press signal if the difference signal is greater than the difference threshold value (col. 24, lines 20-60).

As to claim 7, Gillespie discloses the pressure signal comprises a pseudo pressure signal (e.g. the pressure value is varied in accordance with the capacitance value).

As to claim 8, Gillespie discloses supplying a pressure filter (48-1...48-n, Fig. 3) to the pressure signal to create a filtered pressure signal.

As to claims 9-11, 17, 21-22, 27, Gillespie discloses the pressure filter comprises a first pressure filter comprising a first attribute (e.g. high frequency, col. 13, lines 34-44), and further comprising applying a second pressure filter to the pressure signal, the second pressure filter

comprising a second attribute (e.g. low frequency, col. 15, line 55) that is different than the first attribute.

As to claims 12, 23, Gillespie discloses applying the pressure filter comprises applying the pressure filter utilizing a sliding window (col. 28, lines 47-58).

As to claim 13, Gillespie discloses the input device comprises a touch pad (10, Fig. 1).

As to claims 29, 30, Gillespie discloses determining a rate of change of pseudo-pressure associated with the pressure signal (determining the Z value applied by the user), comparing the rate of change of pseudo-pressure with a threshold (302, 320 in Fig. 17A) and outputting a pressing signal if the rate of change of pseudo-pressure is greater than the pseudo-threshold (Fig. 17A).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie and Astala as applied to claim 31, and further in view Geaghan et al (US 2003/0063073 hereinafter Geaghan).

As to claim 4, Gillespie as modified by Astala does not disclose the adaptive pressure threshold value can vary over time. However, Geaghan teaches the thresholds can be adjusted over time (lines 16-20 in [0040]). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Gillespie as modified by Astala to adjust the adaptive pressure threshold value over time as taught by Geaghan to distinguish valid touch inputs on a continuously updated basis.

8. Claims 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie and Astala as applied to claims 1 and 19, and further in view of Fujita et al. (US Patent No. 6,118,435).

As to claims 18 and 28, it is noted that Gillespie as modified by Astala does not specifically disclose outputting a signal associated with a haptic effect, the haptic effect based at least in part on the pressure signal. Fujita is cited to teach a touch panel device similar to Gillespie. Fujita further discloses a signal associated with a haptic effect, the haptic effect based at least in part on the pressure signal (see abstract and Fig. 2). It would have been obvious to one of ordinary skill in the art to have modified Gillespie as modified by Astala with the tactile force feedback as taught by Fujita so as to provide an interaction between the user and the computer.

Response to Arguments

9. Applicant's arguments filed 7/7/08 have been fully considered but they are not persuasive.

Applicant's remarks regarding 112 1st rejections are not persuasive. In Fig. 3, steps 302 and 306 and paragraphs 41 and 46 of the specification may disclose an upper threshold and a lower threshold. However, the step 306 comparing the pressure signal to the lower threshold **only if** the pressure signal is **less than** the upper threshold. The specification does not disclose comparing the pressure signal against **both** upper and lower thresholds and outputting the press signal if the pressure signal is greater than **both** the upper and lower thresholds as claimed. The claims require "outputting the press signal if the pressure signal is greater than the adaptive pressure threshold value" (claims 31, 32) and the adaptive pressure threshold value comprising a

first and second pressure threshold values (claims 6, 20). The specification only discloses outputting the **press signal** at step 326 (Fig. 3) if the speed is less than a speed threshold, the change in pressure is greater than a threshold value and a first interval has elapsed. The steps 302 and 306 in Fig. 3 of the specification are comparing the pseudo pressure against both lower and upper thresholds to determine whether the finger is **touching** (at step 318), which is not a **press signal**.

Applicant's remarks regarding Gillespie on pages 5-6 are not persuasive. Fig. 19 and col. 49, lines 8-12 of Gillespie teaches "Fig. 19 is a timing diagram illustrating a "push" gesture. To perform this gesture, the finger is first brought near enough to cause cursor motion without causing a virtual button press. Next, **the finger pressure increase past threshold ZpushDown, causing the virtual button to be pressed**" (emphasis added). As stated in the 112 1st rejection above, step 322 in Fig. 3 and [0050] of the specification discloses "the change in pseudo pressure is compared to a threshold value 322". Gillespie clearly teaches comparing a change in pressure (i.e., increase) with a threshold and outputting a press signal if the change in pressure is greater than the threshold as claimed.

Applicant's remarks regarding Astala on page 6 are not persuasive. Col. 9, lines 24-35 of Astala teaches "at step 710, a determination is made that the value of the pressure z of touch input 732 is greater than a predetermined value Za over the period of time t1 that the object touches the touch screen 70, that is greater than a predetermined time tA. that is, the pressure of the object touching the touch screen 70 is determined to be greater than a predetermined pressure value for a period of time, which is greater than a predetermined period of time", which clearly teaches outputting a press signal if the value of pressure of touch input is greater than a pressure

threshold and a first time interval has elapsed. Therefore, Gillespie as modified by Astala discloses “outputting a press signal if the velocity is less than a velocity threshold, the change in pressure is greater than a change in pressure threshold, and a first interval has elapsed” as claimed in claims 1 and 19.

Applicant’s remarks regarding dependent claims 4, 18, 28 are not persuasive since the combination of references reads on the claims.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Regina Liang/
Primary Examiner, Art Unit 2629